## Alibaba Cloud

MaxCompute Pricing

Document Version: 20220602

C-J Alibaba Cloud

### Legal disclaimer

Alibaba Cloud reminds you to carefully read and fully understand the terms and conditions of this legal disclaimer before you read or use this document. If you have read or used this document, it shall be deemed as your total acceptance of this legal disclaimer.

- You shall download and obtain this document from the Alibaba Cloud website or other Alibaba Cloudauthorized channels, and use this document for your own legal business activities only. The content of this document is considered confidential information of Alibaba Cloud. You shall strictly abide by the confidentiality obligations. No part of this document shall be disclosed or provided to any third party for use without the prior written consent of Alibaba Cloud.
- 2. No part of this document shall be excerpted, translated, reproduced, transmitted, or disseminated by any organization, company or individual in any form or by any means without the prior written consent of Alibaba Cloud.
- 3. The content of this document may be changed because of product version upgrade, adjustment, or other reasons. Alibaba Cloud reserves the right to modify the content of this document without notice and an updated version of this document will be released through Alibaba Cloud-authorized channels from time to time. You should pay attention to the version changes of this document as they occur and download and obtain the most up-to-date version of this document from Alibaba Cloud-authorized channels.
- 4. This document serves only as a reference guide for your use of Alibaba Cloud products and services. Alibaba Cloud provides this document based on the "status quo", "being defective", and "existing functions" of its products and services. Alibaba Cloud makes every effort to provide relevant operational guidance based on existing technologies. However, Alibaba Cloud hereby makes a clear statement that it in no way guarantees the accuracy, integrity, applicability, and reliability of the content of this document, either explicitly or implicitly. Alibaba Cloud shall not take legal responsibility for any errors or lost profits incurred by any organization, company, or individual arising from download, use, or trust in this document. Alibaba Cloud shall not, under any circumstances, take responsibility for any indirect, consequential, punitive, contingent, special, or punitive damages, including lost profits arising from the use or trust in this document (even if Alibaba Cloud has been notified of the possibility of such a loss).
- 5. By law, all the contents in Alibaba Cloud documents, including but not limited to pictures, architecture design, page layout, and text description, are intellectual property of Alibaba Cloud and/or its affiliates. This intellectual property includes, but is not limited to, trademark rights, patent rights, copyrights, and trade secrets. No part of this document shall be used, modified, reproduced, publicly transmitted, changed, disseminated, distributed, or published without the prior written consent of Alibaba Cloud and/or its affiliates. The names owned by Alibaba Cloud shall not be used, published, or reproduced for marketing, advertising, promotion, or other purposes without the prior written consent of Alibaba Cloud. The names owned by Alibaba Cloud and/or its affiliates Cloud include, but are not limited to, "Alibaba Cloud", "Aliyun", "HiChina", and other brands of Alibaba Cloud and/or its affiliates, which appear separately or in combination, as well as the auxiliary signs and patterns of the preceding brands, or anything similar to the company names, trade names, trademarks, product or service names, domain names, patterns, logos, marks, signs, or special descriptions that third parties identify as Alibaba Cloud and/or its affiliates.
- 6. Please directly contact Alibaba Cloud for any errors of this document.

## **Document conventions**

Style	Description	Example
A Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	Danger: Resetting will result in the loss of user configuration data.
O Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance.
C) Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	Notice: If the weight is set to 0, the server no longer receives new requests.
? Note	A note indicates supplemental instructions, best practices, tips, and other content.	Note: You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings> Network> Set network type.
Bold	Bold formatting is used for buttons , menus, page names, and other UI elements.	Click OK.
Courier font	Courier font is used for commands	Run the cd /d C:/window command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	bae log listinstanceid Instance_ID
[] or [a b]	This format is used for an optional value, where only one item can be selected.	ipconfig [-all -t]
{} or {a b}	This format is used for a required value, where only one item can be selected.	switch {active stand}

## Table of Contents

1.Billing overview	05
2.Billable items and billing methods	06
2.1. Billing method	06
2.2. Storage pricing (pay-as-you-go)	80
2.3. Computing pricing	09
2.4. Download pricing (pay-as-you-go)	14
2.5. Switch billing methods	15
3.View billing details	18
4.Renewal management	25
5.Overdue payment warning and service suspension policies	27
6.Consumption control	30

## 1.Billing overview

This topic describes the billable items, billing methods, view billing details, and renewal management of MaxCompute.

The following table provides topics that are related to billing of MaxCompute.

Billing management	Description				
Billing method	This topic describes the billable items and billing methods of MaxCompute. This topic also describes how to select a billing method.				
View billing details	This topic describes how to view the billing details and usage records of MaxCompute. This topic also describes how to analyze bills in typical scenarios.				
Renewal management	This topic describes how to manually renew a subscription instance or enable automatic renewal for a subscription instance.				
Overdue payment warning and service suspension policies	This topic describes the alerts for overdue payments and service suspension rules of MaxCompute.				
Consumption control	This topic describes how to impose limits on the pay-as-you-go resources that are consumed by computing jobs.				

# 2.Billable items and billing methods2.1. Billing method

MaxCompute charges fees when you store data and run computing jobs in MaxCompute and download data from MaxCompute by using the Internet. MaxCompute supports pay-as-you-go and subscription billing methods. This topic describes the billable items and methods of MaxCompute to help you select a billing method that suits your business scenario. This topic also describes how to estimate costs for running SQL jobs in MaxCompute.

**Note** MaxCompute notifies you when you have an overdue payment. We recommend that you make a timely payment to avoid service interruption. If you have any questions, submit a ticket.

#### Billable items and methods

The following figure shows the billable items and methods of MaxCompute.



- Storage fees: the fees that are charged by using a tiered pricing structure based on the size of data you store in MaxCompute. For more information about storage fees, see Storage pricing (pay-as-you-go).
- Computing fees: the fees that are charged for the use of computing resources. MaxCompute supports pay-as-you-go and subscription billing methods. The resource usage and payment of the two billing methods are independent of each other. Before you use a computing resource, you must associate the computing resource with a project. For more information, see Computing pricing.
  - Subscription: a billing method for SQL, MapReduce, Spark, and Mars jobs. You can use the resources only after you pay for computing resources.
  - Pay-as-you-go: a billing met hod for SQL, MapReduce, Spark, and Mars jobs.
- Download fees: the fees that are charged based on the size of data that you download from MaxCompute by using the Internet. For more information, see Download pricing (pay-as-you-go).

**Note** You are not charged for importing data to MaxCompute.

Payment: Expenses are calculated by day for each project.

Billing details: For more information, see View billing details.

#### **Billing method selection**

MaxCompute supports pay-as-you-go and subscription billing methods.

(?) Note If you are new to MaxCompute, we recommend that you select the pay-as-you-go billing method. You may require only a small amount of resources before you get familiar with MaxCompute. If you select the subscription billing method, the extra CUs may be left unused. In this case, the pay-as-you-go billing method is more cost-effective.

Typically, you create one development project and one production project to run your service in MaxCompute. You can also create a DataWorks workspace in standard mode to create two projects. For more information about how to create a DataWorks workspace, see Create a workspace.

- Development project: a project that is used to develop and debug jobs. In a development project, random jobs are run with a small amount of data. We recommend that you select the subscription billing method for the development project. The subscription billing method allows you to control costs by specifying a limit for resource consumption.
- Production project: a project to which you publish jobs that you have developed and debugged. If the jobs you publish consume a stable amount of resources, we recommend that you select the payas-you-go billing method. This billing method helps you reduce costs that are charged for unused resources in a subscription plan.

MaxCompute supports SQL, user-defined function (UDF), MapReduce, Graph, Spark, Machine Learning Platform for AI, and Mars jobs. MaxCompute charges you only for SQL jobs without UDFs, MapReduce jobs, Spark jobs, and Mars jobs.

**Note** For more information about the expenses on UDF, Graph, and Machine Learning Platform for AI jobs, follow the latest Alibaba Cloud announcements.

When you estimate storage fees, note that MaxCompute stores files by using compression technology. Files are typically compressed to one fifth of their original size. MaxCompute charges storage fees based on the sizes of compressed files. The estimation of storage fees is for reference only. Check your bill for accurate storage fees.

#### Cost estimation of an SQL job

- If you select the pay-as-you-go billing method, pay attention to cost control. We recommend that you run the COST SQL statement to estimate the cost of an SQL job before you publish the SQL job to the production environment. For more information, see Other operations.
- If you use the MaxCompute Studio plug-in for Intellij IDEA to develop and run an SQL job, Intellij IDEA automatically estimates the cost of the SQL job before the SQL job is run. For more information, see Develop and submit an SQL script.

## Further information about the subscription billing method for computing jobs

- Typically, each process consumes resources of 1 CU. If you purchase 50 CUs and submit a job that requires 500 concurrent processes, the job is performed in 10 rounds, with 50 concurrent processes executed in each round. Each process consumes resources of 1 CU.
- MaxCompute allows you to adjust the memory to be consumed by each process. For more

information, see Other operations.

(?) Note If your SQL statement contains a UDF, each process consumes resources of 2 CUs.

For more information about the subscription billing method in MaxCompute, see Computing pricing.

## 2.2. Storage pricing (pay-as-you-go)

MaxCompute charges you based on the volume of stored data, such as the tables and resources, and backup data in MaxCompute. This topic describes the billing rules of storage.

**?** Note If you have an overdue payment, MaxCompute sends you a notification. If you want to continue to use MaxCompute resources, we recommend that you settle your overdue payment before the resources are released. If you have any questions, submit a ticket to contact MaxCompute technical support.

#### Billing for stored data

MaxCompute records the volume of data stored in each project on an hourly basis. The daily storage fee of a project is calculated based on the following formula: Storage fee = Sum of the hourly data volume for the day/24 × Unit price.

The following table describes the billing rules for data that is stored in a MaxCompute project.

≤ 1 GB	> 1 GB
Free of charge	USD 0.0006/GB-day

For example, if the daily average volume of data that is stored in a project is 10 TB, the daily storage fee is calculated based on the following formula:

```
(10240 - 1) GB × USD 0.0006/GB-day
= USD 6.1434
```

? Note

- MaxCompute compresses your data before storage. You are charged based on the data volume after compression. Data is typically compressed to approximately 20% of the original data volume.
- In most cases, the system generates a bill within 3 to 6 hours after the current billing cycle. For example, the bill for the previous day is generated before 06:00 of the next day. MaxCompute fees are automatically deducted from your account balance.
- If you have questions about your bill, go to Billing Management to view the consumption details.

#### Billing for backup data

The backup and restoration feature is in public preview. During public preview, you are not charged for data backup and storage. As of October 15, 2021, you are charged for data that is backed up on MaxCompute on a pay-as-you-go basis.

MaxCompute provides automatic backup and recovery features. For more information, see Backup and restoration.

You are charged for data that is automatically backed up on MaxCompute. Take note of the following billing rules:

- When project data is modified or updated, MaxCompute automatically backs up the updated project data and generates a data version for each change that occurs. By default, all data versions are retained for one day free of charge.
- A project administrator can specify a longer retention period for backup data. Backup data that is retained for more than one day is charged based on the volume of data. MaxCompute records the volume of data backed up in each project on an hourly basis. The daily backup fee of a project is calculated based on the following formula: Backup fee = Sum of the hourly data volume for the day/24 × Unit price. The unit price for backup data is USD 0.0006/GB-day.

## 2.3. Computing pricing

MaxCompute supports the pay-as-you-go billing method for SQL, MapReduce, Spark, Mars, and MaxCompute Query Acceleration (MCQA) jobs.

**Note** The system sends you a notification when your payment becomes overdue. To ensure service continuity, we recommend that you settle the overdue payment within the specified period. Otherwise, the provision of the service will be suspended. If you have questions, submit a ticket.

MaxCompute supports the following billing methods:

- Pay-as-you-go: You are charged for each job based on the resources consumed by the job. This billing method is used for standard SQL jobs, SQL jobs that reference external tables, MapReduce jobs, Spark jobs, Mars jobs, and MCQA jobs.
- Subscription: You can subscribe to some resources.

MaxCompute supports SQL, MapReduce, Spark, Mars, MCQA, Graph, and machine learning jobs. You are charged for SQL, MapReduce, and Spark jobs but not user-defined functions (UDFs). You are charged for Mars jobs from September 1, 2020. You are charged for MCQA jobs from October 1, 2020. You are not charged for other types of computing jobs.

#### Subscription

You can subscribe to some resources. MaxCompute reserves the resources that you subscribe to. Computing resources are measured in compute units (CUs). One CU is equivalent to 4 GB of memory and 1 CPU core. The subscription billing method is used for computing resources that are consumed by jobs, such as SQL, MapReduce, and Spark jobs.

Resource	Memory usage	CPU	Price (USD/month)				
1 CU	4 GB	1 CPU	22.0				

After you purchase subscription computing resources, you can monitor and manage the resources by using MaxCompute Management. For more information, see Use MaxCompute Management.

We recommend that you select the pay-as-you-go billing method the first time you use MaxCompute. If you select the subscription billing method, you purchase a specific amount of computing resources. If you are a new user, you may consume fewer resources than the purchased resources. Some resources may remain idle. In this case, we recommend that you use the pay-as-you-go billing method. The pay-as-you-go billing method is more cost-effective because you are charged based on the amount of resources that you consume.

#### Billing for standard SQL jobs

Each time you run an SQL job, MaxCompute calculates the fee based on the **amount of input data in computing** and **SQL complexity**. On the following day, MaxCompute aggregates the fees for all executed SQL jobs into one bill within your Alibaba Cloud account. Then, MaxCompute deducts the fees from the balance of your Alibaba Cloud account.

MaxCompute calculates the fee for a standard SQL job by using the following formula:

```
Fee for a standard SQL job = Amount of input data in computing \times SQL complexity \times Unit pric e of a standard SQL job
```

The following table describes the unit price of a standard SQL job.

ltem	Unit price
Standard SQL job	0.0438 USD/GB

- Amount of input data in computing: the amount of data scanned by an SQL job. Most SQL jobs support partition filtering and column pruning. Therefore, in most cases, this value is less than the amount of data in the source table.
  - Partition filtering: If you submit an SQL statement that contains the WHERE ds > 20130101
     clause. ds in the clause is the partition key column. You are charged only for the data in the partitions that are read.
  - Column pruning: If you submit the SQL statement SELECT f1, f2, f3 FROM t1; , you are charged only for the data in columns f1, f2, and f3 of table t1. You are not charged for the data in the other columns.
- **SQL complexity**: The complexity of an SQL job is calculated based on the number of keywords in the SQL statements of the SQL job.
  - Number of SQL keywords = Number of JOIN clauses + Number of GROUP BY clauses + Number of ORDER BY clauses + Number of DISTINCT clauses + Number of window functions + MAX (Number of INSERT statements | Number of UPDATE statements | Number of DELETE statements 1, 1) .
  - Calculation of SQL complexity:
    - If the number of SQL keywords is less than or equal to 3, the complexity of an SQL job is 1.
    - If the number of SQL keywords is less than or equal to 6 but greater than or equal to 4, the complexity of an SQL job is 1.5.
    - If the number of SQL keywords is less than or equal to 19 but greater than or equal to 7, the complexity of an SQL job is 2.
    - If the number of SQL keywords is greater than or equal to 20, the complexity of an SQL job is 4.

For more information about SQL keywords, see JOIN, GROUP BY, ORDER BY, Window functions, INSERT, and UPDATE | DELETE.

You can run the following command to calculate the complexity of an SQL job:

COST SQL <SQL Sentence>;

The following commands show an example on how to calculate the complexity of an SQL job.

```
odps@ $odps_project >COST SQL SELECT DISTINCT total1 FROM
(SELECT id1, COUNT(f1) AS total1 FROM in1 GROUP BY id1) tmp1
ORDER BY total1 DESC LIMIT 100;
Intput:1825361100.8 Bytes
Complexity:1.5
```

In this example, the number of keywords is calculated by using the following formula: 1 DISTINCT clause + 1 GROUP BY clause + 1 ORDER BY clause + MAX(0 - 1, 1) = 4. The complexity of the SQL job is 1.5. If the amount of data that needs to be computed is 1.7 GB, the fee is calculated by using the following formula:

 $1.7 \times 1.5 \times 0.0438 = 0.11$  USD

⑦ Note

- The bill is generated before 06:00 on the following day.
- You are not charged for failed SQL jobs.
- You are charged for SQL jobs based on the amount of data after compression, which is similar to the storage service.

#### Billing for SQL jobs that reference external tables

Since March 2019, you are charged for MaxCompute SQL jobs that reference external tables based on the pay-as-you-go billing method.

You are charged for SQL jobs that reference external tables by using the following formula:

```
Fee for an SQL job = Amount of input data in computing × Unit price of SQL jobs that refere nce external tables
```

The following table describes the unit price of SQL jobs that reference external tables.

ltem	Unit price
SQL jobs that reference external tables	0.0044 USD/GB

The SQL complexity is 1. On the following day, MaxCompute aggregates the fees for all executed SQL jobs into one bill within your Alibaba Cloud account.

#### ? Note

- The bill is generated before 06:00 on the following day.
- For jobs that reference internal and external tables, MaxCompute separately calculates the fees for jobs that reference internal tables and jobs that reference external tables.
- You cannot estimate the fees for SQL jobs that reference external tables.

#### Pay-as-you-go billing for MapReduce jobs

Since December 19, 2017, you are charged for MaxCompute MapReduce jobs based on the pay-as-you-go billing method.

You are charged for MapReduce jobs by using the following formula:

```
Fee for MapReduce jobs of the day = Number of billable hours × Unit price of a MapReduce jo b (USD per hour)
```

The following table describes the unit price of a MaxCompute MapReduce job.

ltem	Unit price
MapReduce job	USD 0.0690/hour/job

The number of billable hours of a MapReduce job is calculated by using the following formula:

Number of billable hours of a MapReduce job = Number of hours for which a job runs × Number of CPU cores consumed by the job

For example, if a MapReduce job that runs for 0.5 hours consumes 100 CPU cores, the number of billable hours is 50 by using the following formula:  $100 \text{ cores} \times 0.5 \text{ hours} = 50$ .

After a MapReduce job is run, MaxCompute calculates the billable hours of the job. On the following day, MaxCompute aggregates the fees for all executed MapReduce jobs into one bill within your Alibaba Cloud account. Then, MaxCompute deducts the fees from the balance of your Alibaba Cloud account.

? Note

- The bill is generated before 06:00 on the following day.
- You are not charged for failed MapReduce jobs.
- The queuing time of jobs is not counted in the billable hours.
- If you select the subscription billing method for MaxCompute, you can run MapReduce jobs free of charge within the subscription period.

#### Pay-as-you-go billing for Spark jobs

Since February 1, 2019, you are charged for Spark jobs based on the pay-as-you-go billing method. For more information, see Spark on MaxCompute overview. You are charged for Spark jobs by using the following formula:

Fee for Spark jobs of the day = Number of billable hours × Unit price (USD 0.1041/hour/job)

#### The number of billable hours of a Spark job is calculated by using the following formula:

Number of billable hours of a Spark job = MAX[Number of CPU cores × Number of hours for whi ch a job runs, ROUND UP(Memory size × Number of hours for which a job runs/4)]

#### Take note of the following points:

- You must provide the number of CPU cores consumed, number of hours for which a job runs, and memory size.
- One billable hour is equivalent to 1 CPU core and 4 GB of memory.

For example, if a Spark job that runs for 1 hour consumes 2 CPU cores and 5 GB of memory, the number of billable hours is 2 by using the following formula:  $MAX[2 \times 1, ROUND UP(5 \times 1/4)] = 2$ . If a Spark job that runs for 1 hour consumes 2 CPU cores and 10 GB of memory, the number of billable hours is 3 by using the following formula:  $MAX[2 \times 1, ROUND UP(10 \times 1/4)] = 3$ .

After a Spark job is run, MaxCompute calculates the billable hours of the job. On the following day, MaxCompute aggregates the fees for all executed Spark jobs into one bill within your Alibaba Cloud account. Then, MaxCompute deducts the fees from the balance of your Alibaba Cloud account.

#### ? Note

- The bill is generated before 06:00 on the following day.
- The queuing time of jobs is not counted in the billable hours.
- The fee for similar jobs may vary based on the amount of specified resources.
- If you select the subscription billing method for MaxCompute, you can run Spark jobs free of charge within the subscription period.
- If you have questions about the billing for Spark jobs, submit a ticket.

#### Pay-as-you-go billing for Mars jobs

Since September 1, 2020, you are charged for MaxCompute Mars jobs based on the pay-as-you-go billing method. For more information, see Overview. You are charged for Mars jobs by using the following formula:

Fee for Mars jobs of the day = Number of billable hours × Unit price (USD 0.1041/hour/job)

The number of billable hours for a Mars job is calculated by using the following method:

- Calculate the number of CPU cores and memory size that are consumed by the job.
- One billable hour is equivalent to 1 CPU core and 4 GB of memory.
- The number of billable hours of a Mars job is calculated by using the following formula: MAX[Number of CPU cores × Number of job running hours, ROUND UP(Memory size × Number of job running hours/4)].

For example, if a Mars job that runs for 1 hour consumes 2 CPU cores and 5 GB of memory, the number of billable hours is 2 by using the following formula:  $MAX[2 \times 1, ROUND UP(5 \times 1/4)] = 2$ . If a Mars job that runs for 1 hour consumes 2 CPU cores and 10 GB of memory, the number of billable hours is 3 by using the following formula:  $MAX[2 \times 1, ROUND UP(10 \times 1/4)] = 3$ .

After a Mars job is run, MaxCompute calculates the billable hours of the job. On the following day, MaxCompute aggregates the fees for all executed Mars jobs into one bill within your Alibaba Cloud account. Then, MaxCompute deducts the fees from the balance of your Alibaba Cloud account.

#### ? Note

- The bill is generated before 06:00 on the following day.
- The queuing time of jobs is not counted in the billable hours.
- The fee of similar jobs may vary based on the amount of specified resources.
- If you select the subscription billing method for MaxCompute, you can run Mars jobs free of charge within the subscription period.
- If you have questions about the billing for Mars jobs, submit a ticket.

#### Pay-as-you-go billing for MCQA jobs

Since October 1, 2020, you are charged for MCQA jobs based on the pay-as-you-go billing method. For more information, see Overview.

Each time you run an MCQA job, MaxCompute calculates the fee based on the amount of input data of the job. On the following day, MaxCompute aggregates the fees for all executed MCQA jobs.

#### You are charged for MCQA jobs by using the following formula:

Fee for an MCQA job = Amount of input data for the MCQA job  $\times$  Unit price (USD 0.0438/GB)

#### ? Note

- MCQA jobs use dedicated computing resources. If you select the subscription billing method for MaxCompute, MaxCompute calculates the fee based on the amount of data scanned by an MCQA job when you run the MCQA job.
- MaxCompute calculates the fee based on the amount of data scanned by each MCQA job. Each MCQA job scans at least 10 MB of data. You are charged for canceled MCQA jobs based on the amount of data scanned.
- The bill is generated before 06:00 on the following day.
- No fee is generated if no query is performed.
- By default, MaxCompute performs column-oriented storage and compression on data. MaxCompute calculates the amount of scanned data based on the compressed data.
- When you query a partitioned table, you can use partition filtering conditions to reduce the amount of scanned data and improve query performance.
- MCQA is in public preview in the following regions: China (Hong Kong), Singapore (Singapore), Indonesia (Jakarta), India (Mumbai), and Malaysia (Kuala Lumpur). MCQA is pending release in other regions.

## 2.4. Download pricing (pay-as-you-go)

This topic describes MaxCompute download pricing.

**Note** If you have an overdue payment, MaxCompute sends you a notification. To continue your access to MaxCompute resources, we recommend that you settle your overdue payments within the prescribed time limit. If you have any questions, submit a ticket.

For data download over the Internet or across regions, MaxCompute charges you based on the size of the downloaded data by using the following formula:

Fee of each download = Size of downloaded data × Unit price for download

#### The following table lists the download price.

Billable item	Price (USD/GB)
Data download over the Internet	0.1166

#### ? Note

- MaxCompute sends messages to notify you of the size of downloaded data and provides you with the bill the next day.
- The size of downloaded data refers to the size of an HTTP body for one download request. The HTTP body in which the data is sent uses protobuffer encoding. Therefore, the size of the downloaded data is generally less than the original data size. However, it is greater than the size of compressed data stored on MaxCompute.
- Different billing methods are applicable to different network environments such as the Internet, classic network, or VPC, as well as to different regions. For more information about MaxCompute connections, see Endpoints.

## 2.5. Switch billing methods

MaxCompute allows you to switch between the subscription and pay-as-you-go billing methods. This topic describes how to switch the billing method of a project by changing its quota group.

#### Prerequisites

Both pay-as-you-go and subscription resources of MaxCompute are purchased.

#### Context

The differences between subscription and pay-as-you-go billing methods are only in the billing and running modes of computing resources. The billing methods for storage and download resources are the same.

The computing jobs in a subscription project can use only the purchased subscription computing resources. Subscription computing resources are exclusive resources, and pay-as-you-go resources are shared resources. Computing resources are CU resources.

The following table describes the scenarios in which you switch billing methods.

Scenario	Description	Effective period					
Switch the billing method from pay-as-you-go to subscription	Supported. You must purchase CUs of MaxCompute before you switch the billing method. You are not allowed to switch the billing method for a project across regions.	The new billing method takes effect immediately. However, if a					
Switch the billing method from subscription to pay-as-you-go	Supported. The fees you already paid are not refunded. However, you can still create projects to use the purchased CUs. After you purchase MaxCompute CUs, you can create multiple projects to share these CUs.	method does not take effect until the next time you run the job.					

Notice We recommend that you do not frequently switch billing methods because this may affect the running time of your computing jobs.

#### Procedure

- 1. Log on to the MaxCompute console, and select a region in the upper-left corner.
- 2. Find the MaxCompute project for which you want to switch the billing method, and click **Switch quota group** in the Actions column to go to the **Workspace Management** page.
- 3. In the **Compute Engine information** section, click the **MaxCompute** tab and modify Quota group switching.

MaxCompute	E-MapReduce		
			+Add insta
Default			
Delaur	r	-	
MaxCompu	te project name:	~	
MaxCompu MaxCompu	te project name: te visitor identity: 👩	Task owner 🧭	

- If you switch the billing method from pay-as-you-go to subscription for the project, select a subscription quota group.
- If you switch the billing method from subscription to pay-as-you-go for the project, select Default pay-as-you-go quota.

⑦ Note If the workspace that corresponds to a project is in standard mode, you need only to switch the billing method for the production project. The billing methods for the development and production projects are the same. If you switch the billing method from pay-as-you-go to subscription, you can switch the subscription quota groups separately for the two projects by using Use MaxCompute Management. For more information, see Change the quota group of a project.

## 3.View billing details

This topic describes how to view the billing details and usage records of MaxCompute. This topic also describes how to analyze billing details in common scenarios.

#### Go to Billing Management

Log on to the Alibaba Cloud Management Console. In the top navigation bar, click Expenses.

Ξ	C-J Alibaba Cloud	China (Shanghai) 🔻	Q Search	Expenses	Tickets	ICP	Enterprise	Support	Official Site	>_	٥.	Ä	0	EN	0
DataWo	orks	DataWorks / Workspaces									Product	t Update	5 D	ocumenta	ition
Overvie	w						Estand Mar	- Faller Dat	-ile   Durchaue	Freebuch			C	en inc Die	
Worksp	aces	Your current edition is Ultimate Edition . Expired At: Dec 11, 2020 .					Extend View	v Edition Det	alls   Purchase	EXClusive	e Kesour	ce Pur	cnase S	ervice Pla	n

(?) Note Before you access Billing Management as a RAM user, you must attach the AliyunBSSFullAccess policy to the RAM user by using your Alibaba Cloud account. For more information, see Grant permissions to a RAM role.

#### View billing details

- Query daily bills.
  - i. In the left-side navigation pane, choose **Spending Summary > Spending Summary**. On the Bills page that appears, click the **Bills** tab.
  - ii. Click the Filter icon next to Product Name and select **MaxCompute** to view the daily bills of MaxCompute.

	Billing Management		Bills						Documentation
	Account Overview		Overview	Bills Details					
•	<ul> <li>Spending Summary</li> <li>Spending Summary</li> </ul>	l	The unset generated	ttled pay-as-you-go data that is a data the beginning of the next mo	returned from t inth. You can v	the current data Include is view and export the bill of	used for reference only. You cannot each month after <span class="prom&lt;/th&gt;&lt;th&gt;reconcile your account base&lt;br&gt;inent">10:00 on the fourth d</span>	id on the data. The bill of each month is ay of the next month.	
	Bill Export	I.	Billing Cycle:	2022-05	Acco	ount/Owner Account:		~ Order/Bill No	Search by order/bill number.
•	Corporate Finance		Search						
	Bills	ł.	Product Na	ame: MaxCompute × Clear				Customize	Column Options 🏦 Export Billing Overview (CSV)
•	Cost Management		Billing Cycle	Account Name		Product Name 💡	Product Detail 🛛	Subscription Type 🛛	Payment Time
	Orders		2022-05			MaxCompute	MaxCompute (Pay-As-You-Go)	Pay-As-You-Go	2022-05-12 00:00:00 ~ 2022-05-13 00:00:00
	Contracts		2022-05			MaxCompute	MaxCompute (Pay-As-You-Go)	Pay-As-You-Go	2022-05-11 00:00:00 ~ 2022-05-12 00:00:00
	Usage Records		2022-05			MaxCompute	MaxCompute (Pay-As-You-Go)	Pay-As-You-Go	2022-05-09 00:00:00 ~ 2022-05-12 00:00:00

Description:

- MaxCompute (Pay-As-You-Go) with Subscription Type set to Pay-As-You-Go: All pay-asyou-go bills that are generated for the pay-as-you-go resource packages of MaxCompute on the day. You are billed for the storage resources, computing resources, and the traffic for Internet-based data downloads in these packages based on the pay-as-you-go billing method.
- MaxCompute (Subscription) with Subscription Type set to Pay-As-You-Go: All pay-asyou-go bills that are generated for the subscription resource packages of MaxCompute on the day. You are billed for the storage resources and the traffic for Internet-based data downloads in these packages based on the pay-as-you-go billing method.

- MaxCompute (Subscription) with Subscription Type set to Subscription: All subscription bills that are generated for the subscription resource packages of MaxCompute on the day. You are billed for all new purchases, configuration upgrades and downgrades, and package renewals based on the subscription billing method.
- Query the daily consumption details of pay-as-you-go billable items.
  - i. On the Bills page, click the Details tab.
  - ii. Select **Billing Item** for Statistic Item, **By Day** for Statistic Period, and **Pay-As-You-Go** for Subscription Type.
  - iii. Click the Filter icon next to Product Name and select **MaxCompute** to view the daily bills for each billable item.

Billing	Management		Bills									Documentation
Accou	unt Overview	*	Overview	Bills	Details							
Spend	ding Summary	L	CThe detai	s of a mo	onthly bill are o	enerated one dav behir	nd the billing date. The	unsettled pav-as-vol	J-do data that is returned	from the current data Include is u	sed for reference only. You ca	annot reconcile vour
Corpo	orate Finance	L	account b For Cloud	ased on f	the data. The o	details of the final consu es, you can search for c	mption for the present lata that is generated i	month are based on n November 2020 an	the data of the next mon d later. The results exclu-	th. de the data of Alibaba Cloud Dom	ains, for example, domain na	imes and
Bills			trademar	is.								
Cost I	Management	L	Billing Cycle:	2022-0	)3 🗎	Account/Owner Acc	ount: Please Sele		Resource Group:	All Resource V		Search
Order	rs		Instance Nar	1e ~								
Contr	racts		Statistic Item:	● B	illing Item 🤇	) Instance O Produ	ict 🔿 Account	Cost Center				
Usagi	e Records	L	Statistic Period	в	illing Cycle	By Day Billing	g Period					
Rene	wal	L	Product N	ame: Max	Compute ×	Clear				@: Customiz	e Column Options 🟦 Expor	t Billing Overview (CSV)
Paym	nent Methods	L	Billing Cycle	Billi	ng Date и	Cost Center 🖓	Account Name		Product Name 💡	Product Detail 🛛	Subscription Type 🛛	Instance ID
<ul> <li>Savin</li> </ul>	igs Plan		2022-03	202	20323	Not Allocated			MaxCompute	MaxCompute (Subscription)	Subscription	
<ul> <li>Resol</li> <li>Coup</li> </ul>	iurce Mackages		2022-03	202	20329	Not Allocated			MaxCompute	MaxCompute (Subscription)	Subscription	-

Description:

- Instance ID: corresponds to a MaxCompute project. Pay-as-you-go bills are generated by project. A bill is generated for each billable item each day.
- Billing Item: includes storage, computing, and the traffic for Internet-based data downloads.

#### Usage:

The usage of each billable item is calculated based on the following description:

- Storage: the storage used for the project on the day divided by 24
- Traffic for Internet-based data downloads: the amount of data that is downloaded over the Internet for the project on the day
- Computing for SQL jobs: the amount of input data for the standard SQL jobs that are successfully executed for the project on the day multiplied by SQL complexity
- Computing for SQL jobs that involve Object Storage Service (OSS) external tables: the amount of input data for the SQL jobs that are successfully executed for the project on the day
- Computing for SQL jobs that involve Tablestore external tables: the amount of input data for the SQL jobs that are successfully executed for the project on the day
- Computing for SQL jobs that use developer resources: the amount of input data for the successfully executed SQL jobs of the project that uses developer resources on the day
- Computing for MapReduce jobs: the billable hours used by the MapReduce jobs that are successfully executed for the project on the day
- Computing for Lightning jobs: the amount of input data for the Lightning jobs that are successfully executed for the project on the day
- Computing for Spark jobs: the billable hours used by the Spark jobs that are successfully executed for the project on the day

You can select other values for **Statistic Item** and **Statistic Period** to view billing details from different dimensions. You can also click **Export Billing Overview (CSV)** in the upper-right corner to download the bills to your on-premises machine and analyze the bills in an Excel file. However, the billing details do not provide the consumption of a single job. To view the consumption of a job, download **usage records** to obtain the original metering information and calculate the consumption of a job.

#### Usage records

Download usage records

Go to the Usage Records page to download and view the daily resource usage records and check how costs are generated. For example, you can check the storage and computing costs of each day and determine from which jobs the costs are generated.

Usage Records		
Note: 1. The file that you 2. If an error messa 3. If the number of 1 4. After the bill of a see the pricing doc 5. To prevent a figu the sum of the figur 6. The time of an ex-	export is in the CSV format. You can use Excel to view th ge appears in the exported file, re-perform the operation: records in the file that you export exceeds the limit, the fil cloud service is generated, you can download the consui umentation of the related cloud service. re in consumption data fails to be displayed in the scienti es, remove the extra spaces. cport result is displayed in UTC+8.	e file. s as prompted. e is truncated. Modify the export conditions and try again. mption data of the cloud service. Otherwise, the consumption data may be empty. For more information about how bills are generated, fic notation format because the number of digits in the figure exceeds the limit, the system suffixes each figure by a space. To calculate
* Product:	MaxCompute(Postpay)	
* Billable Item:	MaxCompute(Postpay)	
* Time Period:	2022-05-01 - 2022-05-13	0
Time Unit:	Hour	
* Verification Code:	Get a new captcha	
	Export CSV	

Configure the following parameters:

- **Product**: the service for which you want to download usage records. Set this parameter to MaxCompute (Pay-As-You-Go).
- Billable Item:
  - MaxCompute(Postpay): the pay-as-you-go billing method
  - ODPSDataPlus: the subscription billing method
- **Time Period**: the time range within which you want to query data. You can specify the start time and end time of the bills that you want to view.

If you start a job on December 1 and the job is completed on December 2, you must set the start time of the time range to December 1. Otherwise, you cannot find the resource usage of the job in the downloaded usage records. The resource consumption record of the job is displayed in the bill that is generated on December 2.

#### Use usage records

After you export usage records to your on-premises machine as a CSV file, use Microsoft Excel to open the file and view the usage records. The following information shows a usage record:

```
-- The CSV file includes the following table headers:
ProjectId, MeteringId, MeteringType, Storage, EndTime, SQLInput(Byte), SQLComplexity, Uploa
dEx, DownloadEx(Byte), MRCompute(Core*Second), InputOTS(Byte), InputOSS(Byte), StartTime, S
pecificationType, and DataWorksNodeID
```

The usage records allow you to perform the following operations:

• View the instance ID of each SQL or MapReduce job and run the following command to view details about the job:

```
odps@ odps_test>desc instance 2016070102275442go3xxxxx;
ID 2016070102275442go3xxxxx
Owner ALIYUN$***@aliyun-inner.com
StartTime 2016-07-01 10:27:54
EndTime 2016-07-01 10:28:16
Status Terminated
console_query_task_1467340078684 Success
Query select count(*) from src where ds='20160628';
```

**?** Note You can also use the TASKS\_HISTORY and TUNNELS\_HISTORY views of MaxCompute Information Schema to view the execution information of a specific job. For more information, see Information Schema. However, the views provide the execution information only for the last 15 days.

- Analyze the original metering information of each SQL or MapReduce job and calculate the cost of the job based on the formula that is described in Computing pricing. Examples:
  - Calculate the costs of standard SQLjobs. ComputationSql in the MeteringType column indicates a standard SQLjob. You can calculate the cost of a standard SQLjob by using the following formula: Cost of a standard SQL job = Amount of input data (GB) × SQL complexity
     × SQL job unit price .
  - Calculate the costs of SQL jobs that involve external tables, such as Tablestore and OSS external tables. The value in the Input OTS(Byte) or Input OSS(Byte) column in the CSV file indicates the amount of input data for an SQL job that involves external tables. You can calculate the cost of an SQL job that involves external tables by using the following formula: Cost of an SQL job = Amount of input data × SQL complexity × Unit price for SQL computing jobs that involve external tables .

The unit price for an SQL job that involves external tables is USD 0.0044/(GB × Complexity). The complexity coefficient is 1.

• Calculate the costs of MapReduce jobs. You can query the resources and time consumed by a MapReduce job in the MRCompute (Core\*Second) column.

#### Bill analysis of common scenarios

• Analyze unexpected cost surges

If your costs surge in one or a few days but the surge is not caused by business growth, perform the following operations to analyze the cause:

- i. Analyze the projects that generate high costs: On the **Details** tab of the **Bills** page, select **Instance** for **Statistic Item** and **By Day** for **Statistic Period**. Then, find the projects that generate high costs based on instance IDs. If the consumption of a project is not as expected, analyze the project.
- ii. Analyze the billable items that generate high costs: On the **Details** tab of the **Bills** page, select **Billing Item** for **Statistic Item** and **By Day** for **Statistic Period**. Then, find the billable items that generate high costs. You can search for a project based on **Instance ID** and analyze its billable items that generate high costs.

Bills	Documentation
Overview Bills Details	
The details of a monthly bill are generated one day behind the billing date. The <u>unsettled</u> pay-as-you-go data that is returned from the current data include is used for reference only. You cannot account based on the data. The details of the final consumption for the present month are based on the data of the next month. For Cloud Communication services, you can search for data that is generated in November 2020 and later. The results exclude the data of Alibaba Cloud Domains, for example, domain names a trademarks.	reconcile your and
Billing Cycle:     2022-05     Account/Owner Account:     Please Select     Resource Group:     All Resource        Instance Name	Search
Statistic Item: <ul> <li>Billing Item</li> <li>Instance</li> <li>Product</li> <li>Account</li> <li>Cost Center</li> <li>Statistic Period</li> <li>Billing Cycle</li> <li>By Day</li> <li>Billing Period</li> </ul>	

- iii. Analyze the computing jobs that generate high costs: If the preceding analysis indicates that the costs of SQL computing jobs surge, you can download usage records and then analyze the records where MeteringType is set to ComputationSql. Sort the costs of SQL jobs and check whether the costs of some SQL jobs are higher than expected or whether a large number of SQL jobs exist. You can calculate the cost of an SQL job by using the following formula: Cost of an SQL job = SQLInput (Byte)/1024/1024 × SQL complexity × SQL job unit price . If the cost of an SQL job is higher than expected, we recommend that you check the ID of the DataWorks scheduling node on which the job runs based on the metering information.
  - If the ID is available, view the execution details of the job in the DataWorks console.
  - If the ID is unavailable, the job is not initiated by a DataWorks scheduling node. In this case, view the execution details of the job by using the SQL billing code indicated by Instance ID and the TASKS\_HISTORY view of MaxCompute Information Schema. For more information about TASKS\_HISTORY, see TASKS\_HISTORY.

select operation\_text from information\_schema.tasks\_history where ds='Partition tha
t corresponds to the date on which the job runs' and inst\_id='SQL billing code indi
cated by Instance ID';

Check whether data uploads and downloads generate costs

You can perform the following operations to check the costs generated by data uploads and downloads:

- i. Export usage records as a CSV file and analyze the billing details for data downloads. **DownloadEx** in the file indicates the billable item for an Internet-based data download.
- ii. For example, you find a record for download traffic of 0.036 GB (38,199,736 bytes). In this case, calculate the cost based on the billing rules described in Download pricing (pay-as-you-go) by using the following formula: (38,199,736 bytes/1024/1024) × USD 0.1166/GB = USD 0.004
- iii. Optimize data downloads.

You can also check whether the service configured for your tunnel is billed due to Internet access. For more information, see Endpoints.

For example, you are located in Suzhou, China, which belongs to the China (Shanghai) region, and want to download large amounts of data. In this case, use an Elastic Compute Service (ECS) instance in the China (Shanghai) region to download data to your virtual machine (VM). Then, use your subscription ECS instance to download the data.

- Analyze how the storage used in part of a day is billed
  - i. Export usage records as a CSV file and analyze the billing details for storage.
  - ii. View the records whose MeteringType is set to Storage. A total of 333,507,833,900 bytes

of data is stored for the **alian** project. The data is uploaded at 08:00. Therefore, storage is billed from 09:07 and you are charged for 15-hour storage.

**Note** If the billing cycle is one day, the billing stops at the end of each day. Therefore, the last record is not included in the bill of that day.

You must calculate the average storage over the last 24 hours based on the billing rules described in Storage pricing (pay-as-you-go). Then, calculate the cost for storage.

```
-- Calculate the average storage.
333507833900 Byte×15/1024/1024/1024/24=194.127109076362103 GB
-- The data size is 194 GB. The storage unit price for the range of greater than 1 GB but less than 100 GB is USD 0.0028 per GB per day. The storage unit price for the ran ge of greater than 100 GB but less than 1 TB is USD 0.0014 per GB per day. Therefore, the storage cost per day is calculated by using the following formula with four decim al places:
100 GB × USD 0.0028/GB-day + (194.127109076362103 GB - 100 GB) × USD 0.0014/GB-day = USD 0.4118/day
```

## 4.Renewal management

This topic describes how to manually renew a subscription instance or enable automatic renewal for a subscription instance in the Renew console.

#### ? Note

- When a subscription instance expires, the instance enters the Expiration state. The projects that are associated with the instance are immediately locked. You can use the projects again only after you renew the instance.
- If you fail to renew an expired instance within the specified period, the resources in the projects that are associated with the instance are released and cannot be recovered.

#### Manually renew an instance

1. Go to the MaxCompute page by using the following method: Log on to the Renew console by using your Alibaba Cloud account. In the left-side navigation pane, click MaxCompute.

Renew 体验新版->	MaxCompute						
Network Attached Stor	All Times 🗸				Instance ID $ \smallsetminus $	Enter the instance ID C	Q
MaxCompute		Manually Renew		Auto-Renew		Don't Renew	
	Instances to Manual	ly Renew: 0					
	Instance ID	Status	Regional Node	Expiration Date	Remaining Days	Actions	

- 2. Find the instance that you want to renew and click **Renew** in the **Actions** column.
- 3. On the Renew page, specify the renewal period, select Terms of Service, click **Buy Now**, and then complete the payment.

#### Enable automatic renewal for an instance

To enable automatic renewal for an instance, perform the following steps:

1. Go to the MaxCompute page by using the following method: Log on to the Renew console by using your Alibaba Cloud account. In the left-side navigation pane, click MaxCompute.

Renew 体验新版->	MaxCompute						
Network Attached Stor	All Times $\checkmark$				Instance ID $\vee$	Enter the instance ID	Q
MaxCompute	Manu	ally Renew		Auto-Renew		Don't Renew	
	Instances to Manually Re	new: 0					
	Instance ID	Status	Regional Node	Expiration Date	Remaining Days		Actions

- 2. Find the instance that you want to renew and click Enable Auto Renewal in the Actions column.
- 3. In the Enable Auto Renewal dialog box, set an auto renewal cycle and click Auto Renew.
- 4. Click the Auto-Renew tab and view the information about the instances for which automatic renewal is enabled.

Renew 体验新版->	1	MaxCompute								
Network Attached Stor		All Times 🗸						Instance ID	$\vee$ Enter the instance ID	Q
MaxCompute		Manua	ally Renew			Auto-Rene	w		Don't Renew	
		Instances to Auto-Renew:	0							
		Instance ID	Status	Regio	onal Node	Expiration Date	Remaining Days	Renewal cycle		Actions
=										

5. Optional. Click Edit Auto Renewal to change the auto renewal cycle, Nonrenewal to disable automatic renewal, or Enable Manual Renewal to switch to manual renewal.

# 5.Overdue payment warning and service suspension policies

This topic describes the overdue payment warning and service suspension policies of MaxCompute.

**Note** MaxCompute sends you a notification when you have an overdue payment. To continue your access to MaxCompute resources, you must settle your overdue payments within the prescribed time limit. If you have any questions, submit a ticket.

#### Overdue payment warning and service suspension policies

The following table describes the overdue payment warning and service suspension policies of MaxCompute.

Billing method	Overdue payment warning and service suspension policy
Subscription	If you do not renew your MaxCompute service after it expires, your MaxCompute service will be suspended after 15 days and released on the 15th day after the service is suspended. If the service is released, data of all MaxCompute projects will be lost and cannot be recovered. During the first 15 days, you cannot use MaxCompute to develop data.
	<ul> <li>If the deduction fails due to reasons such as an insufficient limit for the credit card that is bound to your Alibaba Cloud account, the MaxCompute payment becomes overdue.</li> </ul>
Pay-as-you-go	• If you do not renew your MaxCompute service when you have overdue payments, your MaxCompute service will be suspended after 15 days and released on the 15th day after the service is suspended. If the service is released, data of all MaxCompute projects will be lost and cannot be recovered. During the first 15 days, you cannot use MaxCompute to develop data.

#### ? Note

If the following error is returned when you run a computing job, MaxCompute is suspended or has overdue payments:

ODPS-0420095: Access Denied - Authorization Failed [4093], You have NO privilege to do the restricted operation on {acs:odps:\*:projects/project\_name}. Access Mode is AllDenie d.

#### Configure the notification methods of alerts for overdue payments

By default, the system notifies you of overdue payments by sending short messages or emails to the mobile phone or email address that is bound to your Alibaba Cloud account. To have these notifications sent to a Resource Access Management (RAM) user, perform the following steps on the Message Center page of your Alibaba Cloud account. Perform the following steps to configure the notification methods of alerts:

- 1. Go to the Message Center page.
  - i. In the left-side navigation pane, click **Common Settings**.

😑 🕞 Alibaba C	Q Search		Billing	Ticket ICP Enterprise Support
Message Center	Alibaba Cloud DNS Operation Notifications		۷	Account Contact Modify
<ul> <li>Internal Messages</li> </ul>	Alibaba Cloud DNS High Risk Notification		۵	Account Contact Modify
All Messages Unread Messages	Notifications of Product Expiration	V	$\checkmark$	Account Contact Modify
Read Messages	Product Overdue Payment, Suspension, and Imminent Release Notifications	V	$\checkmark$	Account Contact Modify
<ul> <li>Message Settings</li> <li>Common Settings</li> </ul>	Notifications of Product Release	V	V	Account Contact Modify
1	Product Renewal or Bill Settlement Notifications			Account Contact

- ii. On the Common Settings page, select Product Overdue Payment, Suspension, and Imminent Release Notifications, and click **Modify** in the Contact column.
- 2. In the Modify Contact dialog box, modify the contact to whom you want to send the notification.

After you modify the contact, the notifications for overdue payments, service suspensions, and the imminent release of all Alibaba Cloud services within the account are sent to this contact.

- Add an existing user as the message recipient: Select the user you want to add as a message recipient and click Save.
- Add a new user as the message recipient.
  - a. Click Add Message Recipient.

Remind A	der:You can go to Manage C message will be sent to ver	contacts to add or modify the contacts. rify the email address.		
lessage 1	Type: Product Message - Pr	oduct Overdue Payment, Suspension, and Imm	inent Release Notifications	
	Name	Email	Occupation	Action
<b>~</b> ]	Account Contact	s****@service.aliyun.com		
+ Add Re	eceiver			

b. Specify **Name** and **Email**, and click **OK**.

Reminder: You can go to Mana A message will be sent to	ge Contacts to add or modi o verify the email address.	ify the contacts.		
essage Type: Product Message	- Product Overdue Paymer	nt, Suspension, and Imminent Releas	se Notifications	
Name	Email		Occupation	Action
Account Contact	s****@service	aliyun.com.		
Name	Email	Please select an item	÷	OK Cancel
ote:At least 1 receivers are need	ded.			

c. Select the newly added user and click **Save**.

## 6.Consumption control

This topic describes how to impose limits on the pay-as-you-go resources that are consumed by computing jobs.

#### Description

Pay-as-you-go resources in MaxCompute are scalable. Computing jobs can use these resources without limits. To avoid unexpected consumption, we recommend that you monitor the resources consumed by computing jobs.

MaxCompute allows you to configure an upper limit for the resources that are consumed by an SQL statement. Before an SQL statement is executed, MaxCompute estimates the resources to be consumed by this statement. If the estimated consumption exceeds the specified upper limit, the SQL statement cannot be executed, and a failure message is returned. You can use this feature to prevent unexpected charges caused by an SQL statement.

## Configure an upper limit for the resources that are consumed by an SQL statement

You can configure an upper limit for the resources that are consumed by an SQL statement for a project or session.

• Configure an upper limit for a project. You can run one of the following commands to impose or remove the limit on or from the resources that are consumed by an SQL statement. Make sure that you are the project owner or have been assigned the Super\_Administrator role.

-- Impose the limit on the resources that are consumed by an SQL statement.
setproject odps.sql.metering.value.max=<m\_value>;
-- Remove the limit from the resources that are consumed by an SQL statement.
setproject odps.sql.metering.value.max;

m\_value indicates an upper limit for the resources that are consumed by an SQL statement. m\_value is calculated by using the following formula: m\_value = Number of gigabytes scanned by an SQL statement tement × Complexity of the SQL statement . m\_value does not indicate your consumption fees.

The resources that can be consumed by an SQL statement for a project are limited by m\_value. If the estimated consumption value of an SQL statement exceeds m\_value, the SQL statement cannot be executed.

• Configure an upper limit for a session. You can submit the following command with the SQL statement to impose the limit on the resources that are consumed by the SQL statement. If the command is not added before the SQL statement, the limit is removed. This configuration takes effect for the specified SQL statement only once.

```
set odps.sql.metering.value.max=<m_value>;
```

If you configure an upper limit for both a project and its session, the configuration for the session takes precedence over that for the project. For example, if you set m\_value to 100 for a project and 200 for a session in the project, the statement cannot be executed only if the estimated resource consumption exceeds 200. SQL statements that do not have a session-level upper limit are subject to the upper limit at the project level. If the estimated resource consumption exceeds 100, these SQL statements cannot be executed.

Take note of the following points:

• We recommend that you specify m\_value for a project based on the historical consumption records and resources that are expected to be consumed by an SQL statement.

You can download daily consumption information and calculate the consumption of an SQL statement whose data category is computation in a project by using the following formula: Consum ption of an SQL statement = Number of gigabytes scanned by the SQL statement × Complexity of the SQL statement . After the calculation is complete, you can determine an appropriate m\_value based on the maximum daily consumption and business fluctuation.

You can also convert the calculated consumption to consumption fees. This way, you can determine the fees based on business conditions and convert the fees to an m\_value.

• We recommend that you specify m\_value for a project and then sessions for some SQL statements.

**?** Note Before you configure an upper limit for an SQL statement at the session level, make sure that this upper limit is required for the SQL statement. This avoids abuse of this feature.

• The execution of a job is affected no matter whether you configure an upper limit for a project or session. We recommend that you use this feature with the features that provide alerts related to job execution failures, for example, the intelligent monitoring feature of DataWorks. This way, failed jobs are immediately detected and processed to minimize the impact of these jobs on your business.